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TRANSFORMATION OF BRITISH INDUSTRIAL RELATIONS? INSTITUTIONS, CONDUCT AND OUTCOMES 1980-1990

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Abstract

The institutions and conduct of British industrial relations changed fundamentally in the last decade or so. Union membership haemorrhaged. Management prerogatives were restored. Management often extricated itself from previous pluralist arrangements involving joint regulation with unions. Under half of employees are now covered by collective agreements. The industrial relations environment has become harsher. Product market competition has intensified. Legislative changes have undermined collectivism. But what of the performance outcomes? Here the story is very different. The industrial relations system can no longer be held to stymie companies' achievements. But this is not a "transformation". It simply reflects compliance of labour in the conduct of workplace relations. The impact of changes in industrial relations institutions and conduct on the pay/jobs trade-off are even more actutely depressing. The pay-setting institutions have certainly been transformed. The government has achieved virtually all it set out to do yet unemployment rises inexorably to a post-war record high.

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TRANSFORMATION OF BRITISH INDUSTRIAL RELATIONS? INSTITUTIONS, CONDUCT AND OUTCOMES 1980-1990*

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> "There can be no doubt about the transformation which has taken place in British industrial relations in the past decade" Michael Howard, Secretary of State for Employment, Hansard 166(39), 29 January 1990, col. 38.

> "What Thatcherism appears to have produced is neither new realism nor flexibility but a system of workplace industrial relations with much the same features as were previously seen as responsible for Britain's economic decline ... there is surprisingly little evidence of a dramatic shift of bargaining power away from the unions" John MacInnes, Thatcherism at Work, Open University Press 1987, pp. 133, 136.

No consensus exists concerning the extent and consequences of change in British industrial relations in the last decade or so. There is no doubt that there has been a transition away from the traditional system, although towards what is unclear. Millward et al. (1992, summary p.6) write that "the distinctive 'system' of British industrial relations based on collective bargaining is no longer characteristic of the economy as a whole." But transition towards an unknown destination is not necessarily the same as transformation.

In what follows we examine the alterations in industrial relations structure (institutions) and conduct (processes) in part I. This covers unions, management, bargaining and the environment. In part II we analyse the links between the modifications to the institutions/processes and the performance outcomes of the system. The two major outcomes concern the pay/jobs trade-off and the performance of workplaces and companies. These are dealt with in turn. Much of the evidence is taken from successive Workplace Industrial Relations Surveys (WIRS) covering approximately 2,000 workplaces in 1980 (WIRS1), 1984 (WIRS2) and 1990 (WIRS3, see Millward et al. 1992).

I INSTITUTIONS AND CONDUCT

1 Union Presence

In 1991 37% of employees were union members (Beatson and Butcher 1993). Union membership rose by some 3 million during the 1960s and 1970s, reaching its zenith in 1979. Since then it has fallen back such that in 1990 membership and density was similar to its 1960 figure (see table 1).

Profound changes in union presence occurred between 1984 and 1990. The WIRS evidence focusses on workplaces with 25 or more employees. Table 2 documents the decline. The number of establishments recognizing unions for collective bargaining fell from two thirds to one half. Putting it another way, by 1990 collective industrial relations were the norm for only half of workplaces (with 25+ employees). There is some evidence of partial or complete derecognition in smaller workplaces, engineering, printing and establishments which were independent of any larger organization (Gregg and Yates 1991, Millward et al. 1992). More important is the lack of new recognition. In the private sector, workplaces that were less than 10 years old recognized unions in only 23% of cases compared with 52% of those that were more than 20 years old.

Density fell virtually hand-in-hand with this decline in the fraction of workplaces recognizing unions: it waned for both manual and non-manual workers, and for private and public services and manufacturing. Taking a longer perspective, the period since 1979 represents the longest ever continuous period of declining union membership. Future analysis of industrial relations will have to pay far greater attention to the non-union sector.

Among workplaces which recognized unions the extent of multiple unionism was unchanged for manual workers. But among non-manuals multi-unionism diminished, particularly in the public sector. In 1990, focussing just on workplaces with recognized unions, we find:

Number of recognized unions	1	2	3	4+	Mean
% of establishments	36	31	12	20	2.5

Thus only one third of establishments had single unionism and a fifth had 4 or more unions. It is clear that "single union deals" are not as pervasive as might be thought from the publicity and controversy they generate. However, an increasing proportion of workplaces with multiple unions engage in single table bargaining (Marginson and Sisson 1990) which can be thought of as a halfway house towards single unionism.

Closed shops represent the pinnacle of union strength. In 1979 over 5 million workers were covered by these arrangements. The majority were in post-entry shops, where union membership was required once in the job. Around 1-in-6 were in pre-entry shops where membership was required to get a job. Table 2 shows that this totem of union power has virtually withered away. And legislative changes since 1990 have outlawed all closed shops.

Union organization has also altered since 1979. First, membership has become more concentrated (Bird, Kirosingh and Stevens 1992). In 1990 there were only 287 unions, down from 453 in 1979 (and only a fifth of the peak number of 1,384 in 1920). 4-in-5 union members now belong to a union with over 100,000 members and 3-in-5 to one with over a quarter of a million members. Second, the central union hierarchy has reasserted control over constituent workplaces (Elgar and Simpson 1993), largely to ensure that union funds are not put at risk from unlawful industrial relations acts. Third, union finances are a cause for concern. Willman (1990) terms unions' net worth (assets minus liabilities) as a multiple of spending the "acid test" measure because it indicates how long a union could operate if it had no revenue coming in. This indicator has consistently declined in the post-war period.

Explanations for shrinking union influence have exercised industrial relations academics and other scholars. A full treatment would require a separate paper. Instead, the focus here is more narrow, on density. The intersection of Thatcherite policies with long-run trends is the cause of lower trade union membership. More specifically, density has contracted because of the complex interaction of five factors: macroeconomic variables; labour force composition; and policies of the state, employers and unions themselves.

Carruth and Disney (1988) examined movements in density from 1896 to 1984. They found that, when unemployment and real wage growth were high relative to trend, this exerted a depressing influence on density. They went as far as to state that: "the downturn in membership [in the 1980s] is entirely a cyclical phenomenon." This seems a bit strong. Further, the slow-down in real wage growth and rapid fall in unemployment 1988-90 should -- according to business cycle theory -- have caused membership to increase, but it did not.

Composition arguments are deceptively seductive. The probability of belonging to a union is higher for full-timers than part-timers, men than women, manuals than non-manuals, in manufacturing than in services, in large workplaces than in small ones, in northern Britain than in southern. Therefore, so the argument runs, because the mix of jobs and workers moved unfavourably with respect to union membership on all counts, membership was bound to decline. Booth (1989) ascribes nearly half the decline in density 1980-86 to such composition effects. This begs two questions. First, most of the trends noted above were in operation in the 1970s when membership rose rapidly. Second, why have unions not been able to get recognized, organise and recruit in expanding areas of employment?

The legislative onslaught against unions was forcefully advanced by Freeman and Pelletier (1990). They analysed fluctuations in density 1948-86. The control variables included macroeconomic variables, industry composition, and the political complexion of the government. The authors calculated a "legislation index" according to how favourable or unfavourable various strands of labour law were to unions in each year. Changes in the law were held to be "responsible for the entire decline" in density levels - clearly inconsistent with the identical claim of Carruth and Disney concerning macroeconomic factors.

Employer policies towards unions are crucial. Recognition is the fulcrum on which membership moves. In the WIRS panel, de-recognitions were twice as likely as new recognitions 1984-90. Encouragement of human resource management among employees in unionised workplaces (see Section 2) has further undermined the traditional collective approach to industrial relations.

Finally, unions' own policies surely count. In recent years, many unions have adopted a "market share" approach. They have attempted via mergers, amalgamations and transfers of engagements to boost their share of a declining pool. This may well be a sensible defensive tactic, but it does not boost aggregate membership. It is noteworthy that the most successful union in the 1980s -- The Royal College of Nursing -- trebled its membership to 300,000 by emphasising its professional ethos and exclusive craft status.

2 Management

"The main feature of industrial relations in the 1980s was that managers were firmly in charge." So conclude Kessler and Bayliss (1992) in their exhaustive study of industrial relations in the last quarter of a century. The ascent of management cannot be quantified in the way that the decline of union organisation is measurable. But certain features of management practice during the 1980s and 1990s stand out. Dunn (1993) shows how management has frequently de-incorporated itself from previous pluralist practices involving joint regulation with unions. This de-incorporation is associated with greater decentralization, a spread of human resource management practices and changes to the substantive clauses in collective bargaining.

Consequent upon the findings of the Donovan (1968) Report into our industrial relations, "management 'sponsorship' of shop stewards in the 1970s became the vogue ... previously feeble stewards found themselves with the procedural wherewithal to do something to satisfy their members' demands" (Dunn 1993). Studying over 50 companies in 1979, Dunn traces how a 'live and let live' principle evolved such that managerial ambition was stunted and its imagination unionised. In surveys in the 1970s managers generally stated they were content, but this was because "stewards defined the terms of the truce and management rationalised their compliance." When he revisited these companies in 1990-91 he noted the re-assertion of managerial prerogative. This was not simply a consequence of greater product market competition and higher unemployment. Rather it had involved great effort - not just getting rid of restrictive working practices, but "breaking the routine of conforming with bargaining rituals and of deferring to steward power."

One such ritual that was ruptured was multi-employer bargaining. Purcell (1991) shows that the 1980s witnessed the culmination of the process of collapse of multi-employer bargaining and simultaneous decentralization to local units. Further, "it is extremely rare for the trade unions to have initiated the restructuring of collective bargaining. In most cases they have opposed it, unsuccessfully." This decentralisation of management is evidenced by the fact that membership of employers organisations halved between 1980 and 1990.

Although some decentralisation was going on before 1980 its pace accelerated around then. Management experts such as Purcell indicate that the dominant force for this change in industrial relations is the "development of business policies and corporate strategies concerned with the structure, shape, and control systems of the firm which have forced personnel and industrial relations managers, often reluctantly, to restructure collective bargaining." This is especially the case with large enterprises which dominate the British economy to a greater extent than in other OECD countries.

While the change to decentralised management is self-evident, there is more debate concerning the extent to which it has been accompanied by human resource management (HRM). Evidence from WIRS3 (Millward et al. 1992) shows that HRM practices are on the increase, but that -- paradoxically -- they are more prevalent in union than in non-union workplaces (see Sisson 1993 for further details).

The decline in union density and recognition was outlined in section 1. Workplace-level joint consultation committees provide an alternative mechanism to conduct collective industrial relations. The fraction of workplaces with such arrangements rose in the 1970s, but these committees have also been in decline subsequently:

	% of workplaces with JCC	
	1984	1990
Union Workplaces	41	37
Non-union Workplaces	21	19
All Workplaces	34	29

Thus there is no evidence that JCCs have filled the institutional vacuum left by the decay in collective bargaining.

By contrast "individual" practices - usually thought of as components of HRM - are spreading. Examples include team briefings -- now regularly used by nearly half of all workplaces, and line managers spending more time on personnel matters.

Possibly more important are the changes in payment systems (see table

3). There was no overall increase in payments-by-results between 1984 and 1990 but it is notable that one-third of establishments had some form of merit pay -- dependent on the subjective judgment of a supervisor or manager -- by 1990. Profit sharing schemes and ESOPs both expanded.

However, these "individual" elements in pay probably account for only a tiny fraction of the total wage bill. In 1990 a third of establishments had an ESOP and in these workplaces a third of employees participated (see table 3). If the ESOP accounted for, say, 10% of total pay, this implies that ESOPs total only around 1% of the aggregate British private sector wage bill. If merit pay and profit sharing represent similar fractions it can be readily seen that these HRM elements have a shallow hold.

Contents of collective agreements provide one indication of the tilt in the balance of power towards management in the 1980s and 1990s. Such analysis confirms that it is vital not to associate procedural stability with a lack of dynamism in industrial relations. Wright (1993) has studied over 100 such agreements for the same 50 companies operating in 1979 and 1990. He found that procedural clauses were rather robust: clauses relating to statements of intent and the parties recognized had changed little. There were some procedural extensions concerning dispute resolution, check-off and shop steward constituencies and time off. Closed shop clauses were the most likely to be deleted, although in the majority of cases they remained extant. It is noteworthy that there was virtually no extension of "new style deal" procedures incorporating clauses covering, for example, co-operative statements of intent, single status, and final offer arbitration to resolve disputes.

By contrast, there was a noticeable shift in the <u>substantive</u> clauses towards greater flexibility of work organization. Sometimes such flexibility was achieved via formalisation of more flexible job descriptions but more often the 1990 clauses emphasised managerial prerogative in determining job tasks.

3. Collective bargaining

The diminution of unionisation and developments in managerial practices outlined above leads naturally to a consideration of changes in the coverage, structure and quality of collective bargaining.

Official attitudes towards collective bargaining have altered dramatically over the past quarter of a century. Brown (1993) - from where the following quotes are taken - charts these views. The Royal Commission on Trade Unions and Employers Associations 1965-68 stated:

> "Properly conducted, collective bargaining is the most effective means of giving workers the right to representation in decisions affecting their working lives. While therefore the first task in the reform of British industrial relations is to bring greater order into collective bargaining in the company and plant, the second is to extend the coverage of collective bargaining and the organization of workers on which it depends." (Donovan 1968 para 212).

Yet 24 years later we find the Secretary of State for Employment reporting to Parliament that:

> "Traditional patterns of industrial relations, based on collective bargaining and collective agreements, seem increasingly inappropriate and are in decline." (Cm. 1810, para 1.15).

Donovan certainly got its wish to extend collective bargaining during the 1970s but subsequently the coverage of collective agreements decayed rapidly, particularly in the second half of the 1980s. Brown (1993) assembled these figures from a variety of sources:

	% of all employees covered by collective agreements
1968	65
1973	72
1984	64
1990	47

Collective bargaining is also now the norm in only a minority of workplaces and it has ebbed in importance in both private manufacturing and services and in the public sector in the last decade (table 4). Where pay in the private sector is still determined by collective bargaining two features stand out. First, multi-employer bargaining has decayed. But, second, there is also less fragmentation of internal company bargaining.

Many multi-employer ("national") agreements have collapsed or been greatly reduced in influence or coverage since 1986 (Brown and Walsh 1991). Examples include engineering, buses, banking, cotton textiles, independent television, food retailing and manufacturing, docks, cement, newspapers, merchant shipping and wholesale meat. Around half of all employees in the private sector have their pay determined by collective bargaining, and, of these, 4-in-5 are now covered by single employer bargaining.

This decentralisation has not, however, extended to workplace level. Rather the reverse. Most multi-plant employers bargain at division rather than workplace level so moderating the fragmentation of bargaining inside the firm. And where there is decentralisation to the workplace -- perhaps to be congruent with profit-related product centres -- "companies have tended to introduce higher level co-ordination of ostensibly decentralised pay control points" (Brown and Walsh 1991). Thus the switch away from multi-employer negotiations has gone hand-in-hand with the extension of negotiating structures at enterprise or company level.

This corporate control of decentralised bargaining is potentially important. It has been asserted that greater co-ordination of pay bargaining is required to improve the macroeconomic trade-off between pay and jobs (Layard 1990, Soskice 1990). Leaving aside the merits of the case for co-ordination, some critics have suggested it is an impossible dream consequent on the decentralisation of pay bargaining (see, e.g. the debate in IRS Employment Trends 485, 5 April 1991). This criticism is probably wrong. Although the number of "pay control points" -- a more useful concept here than bargaining groups -- rose when multi-employer bargaining collapsed, this increase was partially offset by the lower degree of fragmentation of bargaining inside the company. If it were held to be desirable, co-ordination could probably be achieved by focussing on the largest 100 or so private sector companies.

The quality of collective bargaining encompasses (Brown 1993) the degree of union security provided by employers, the depth of union involvement in the administration of bargaining, the scope of bargaining, and the degree of control exercised by collective agreements. The evidence is mixed.

We have already seen that union security has waned. Where collective bargaining remains unions are still deeply involved through shop stewards, office facilities and check-off. However, as Brown (1993) points out, this could represent either union strength or weakness -- workplace organization being dependent on management for legitimacy and other resources. The scope of bargaining contracted between 1980 and 1990 such that fewer issues were subject to joint regulation. Finally, single employer bargaining -- accompanied by greater procedural formality -- has greatly increased the degree of control of agreements on both pay and non-pay matters.

Considerable disagreement exists concerning the factors underpinning pay determination (Blanchflower and Oswald 1988). Those who emphasise bargaining -- one version of which is the 'insider-outsider' theory -- stress the importance of the company's own economic and financial performance. In this approach, pay is set, in large part, by how well the employer is doing.By contrast, the competitive (or classical) theory stresses that the wage cannot be controlled by either the employer or the worker. As Blanchflower and Oswald put it (p. 364): "The going rate of pay is fixed by conditions in the whole economy, and most especially by the total demand for and supply of labour. Each firm must pay the going rate. It has no need to raise wages when its productivity increases or its sales boom; if it did so it would be inundated with applicants from other sectors. In this kind of world 'insiders' have no power." In general, industrial relations specialists prefer the bargaining approach while many economists emphasise competition (though in recent years some economists have been stressing the importance of institutions, see e.g. Blanchflower et al. 1990, Carruth and Oswald 1987).

WIRS3 provides excellent information on this debate (Millward et al.

table 7.11). Pay setting is influenced by <u>both</u> competitive pressures and by bargaining. Typically, labour market factors like recruitment and retention and a link to other settlements -- the going rate -- emphasise the importance of competition. But the economic performance of the workplace or company is mentioned just as often as labour market factors, and given equal weight in both the union and non-union sectors. Further, 'individual performance' is mentioned by a substantial fraction of managers in non-union workplaces. This WIRS3 evidence supports -- for both union <u>and</u> non-union labour markets -- Blanchflower and Oswald's statement (p. 367), using information from WIRS2, that "these results are difficult to reconcile with the wage taking firm of classical theory."

This evidence on the extent, structure and quality of collective bargaining confirms the views of Millward and his co-authors concerning the aims and achievements of successive governments since 1979: "Government policy, both through its dealings with its own employees and through persuasion and advocacy to other employers, encouraged a move away from national, multi-employer pay settlements towards more locally determined ones which were more sensitive to local labour markets and the circumstances of the employer" (Millward <u>et al.</u> 1992 p. 217). The objective has been accomplished. Whether this has improved the outcomes of the industrial relations system - particularly concerning pay and jobs - will be examined in part II.

4. Environment

The environment in which industrial relations are conducted is sharply different now from what it was in the decade following the Donovan Report in 1968. There are three main elements. First, the composition of the workforce has altered and high unemployment casts a fearful shadow. Second, unionised firms now face much greater international and domestic competition than previously. Third, the state has mounted a sustained attack on collectivism. The legislative onslaught against unions is the best known component of this assault, but there are others including privatisation, contracting-out and the withdrawal of collective bargaining for many public sector workers. It is probably the combination of these three environmental factors which has contributed to the changes in outcomes discussed in part II.

At the time of the Donovan Report, employees in employment accounted for 89% of the total workforce; that figure now is 75%. Then, women represented a little over one-third of employees; now they account for nearly half. In the 1960s 2-employees-in-5 were in manufacturing, twice today's proportion. There has also been a substantial increase in part-timers, self-employed and those on temporary contracts. And, sadly, each successive peak of unemployment reaches a new higher total. This unemployment "fear factor" has had a real impact on industrial relations practice.

Many trading companies -- and particularly those with a strong union presence -- have experienced more intense product market competition in the 1980s and 1990s. Exchange controls were removed in 1979. The exchange rate was seriously overvalued in the early 1980s and early 1990s forcing exporters and import-competing companies to improve their unit labour costs or go out of business. State subsidies to lame duck, monopolistic, highly unionized firms were simply axed. This applied particularly to firms with predominantly male workforces in coal, steel, cars, shipbuilding and aerospace, where subsidies had reached record levels in the late 1970s.

It is also possible to point to instances where cosy cartels between management and unions to boost their own profits and pay at the expense of the consumer have been breached almost overnight, leading to amazing adjustments in work practices. Proposals (now implemented) to auction, rather than to allocate by committee, the franchises to operate commercial TV networks undermined the monopoly position of the TV companies and unions. Imminent competition from the channel tunnel breached the cross-channel ferry duopoly leading to changed work patterns among seamen. And new technology permitted new entry into national and provincial newspaper production, causing changes in working practices and contracts among craft workers, general workers and journalists. In each of these three cases the unions -- all of which previously operated closed shops -- were vanquished in the bitter industrial disputes which accompanied the ending of the old regime.

Industrial relations legislation passed between 1980-93 is summarised in Dunn and Metcalf (1993). Its thrust has been to undermine collectivism by promoting individual responsibility, voice, exit from collective decision and organization and loyalty to the organization. At the start of the 1980s, statutory union recognition procedures were in place (albeit rather ineffective), a firm could not isolate itself from a dispute in which it was not involved, and unions as organisations were completely immune from tortious liability. Now, this position is very different. It is up to the firm to decide whether or not to recognize a trade union. That union has a legal personality, so the firm can get injunctions and damages against the union itself. The definition of a trade dispute attracting immunity has been successively reined back: it must be between workers and their own employer, subject to majority support at the workplace in a secret ballot and not designed to foster or maintain a closed shop. The firm can use the courts to insulate itself from secondary action and can selectively dismiss unofficial strikers.

State sponsored routes to spread the effects of collective bargaining have all been withdrawn. The century-old Fair Wage Resolutions which ensured workers employed by firms undertaking public contracts were paid the rate for the job were rescinded in 1982. Previously, in 1980, the comparability machinery under Schedule 11 of the 1975 Employment Protection Act was abolished. The Wage Council system was also narrowed in scope to exclude young workers and is about to be abolished.

In a nutshell, where a union is recognized the legislation has made the firm and the union responsible for their own workplace industrial relations and where there is no union it is now harder to organize than previously. The narrowed definition of a trade dispute and outlawing of secondary action can be thought of as encouraging "company unionism". Employees' commitment to the company might be enhanced further by provisions in the 1982 Act which oblige the company to state in its Annual Report its policy on information, consultation and employee involvement, and by various measures in successive budgets which have encouraged profit sharing and employee share ownership schemes, discussed in section 2.

The "voice" of the individual member, relative to that of the activist and union official, has been given a boost through the various secret ballot provisions. Ballots are required prior to industrial action, for elections of union executive members and to decide whether a union be permitted to hold funds for political activity. Further, the individual union member can restrain the union from calling them to take industrial action which has not been supported by a majority in a secret ballot. All these strands require the official union hierarchy to exercise more control over their shop stewards at workplace level. Perhaps the most potentially far-reaching element of individual voice is the establishment of a Commissioner for the Rights of Trade Union Members. A disaffected union member can apply to the Commissioner to use public funds for court proceedings against the union, or for the Commissioner herself to take on the case on the member's behalf. No comparable arrangements exist for disaffected shareholders or golf club members.

Exit has been made easier for both individuals and firms. The assault against the closed shop culminated by outlawing post-entry closed shops in 1988 and pre-entry closed shops in 1990. Now, it is wholly a matter of individual choice to belong or not to belong to a union, although it is in the employer's gift to decide whether a union will be recognized. An individual union member can also exit from a dispute: he or she can continue working even in the face of an overwhelming majority in a secret ballot in favour of industrial action and the union is impotent to discipline that member. The weakening of the "floor of individual employment rights" also means that the firm can more easily exit from the employment contract. For example, a worker does not benefit from unfair dismissal provisions until he or she has been with the company for two years, four times longer than in 1979.

It is now necessary to evaluate how reduced union presence, the harsher climate, and the other alterations to managerial strategy, tactics and bargaining structures influenced the performance outcomes of the system.

II OUTCOMES

5 Pay and Jobs

Modifications to unions and to the industrial relations system set out in part I can have, at least, three different influences on pay. First, the pay structure can be modified via changes in the pay differential achieved by unionised employees compared with their non-union counterparts. Second, the distribution of pay can be altered through union activity. Third, the industrial relations system might affect the rate of growth of nominal and/or real pay. These issues are considered in turn. In each case the related implications concerning jobs are also discussed.

There is now general agreement that, on average, unionised workplaces pay higher wages than otherwise comparable non-union ones. Fortunately, successive WIRSs, and other surveys, permit us to go well beyond this bald statement. We now know how the structure of bargaining influences the union/non-union differential; how this differential responds to changes in the bargaining environment like increased competition or anti-union laws; and how the differential varies by demographic characteristics --- which permits us to gauge the impact of unions on equality.

Semi-skilled employees in workplaces where a union is recognized for collective bargaining earned, on average in 1984, around 8% more than their counterparts in non-union workplaces (see table 5). But this "average" conceals as much as it reveals. In particular, we need to unravel it to examine the union effects associated with different density levels, closed shops, and with multiple or single unionism.

In workplaces without a closed shop, high density (above 95%) was required in 1984 to get the wage premium associated with recognition. When unions were recognized, but density was below 95%, the workplace paid no more than the corresponding non-union workplace. Where there was a closed shop, the post-entry variety yielded no extra, over and above simple recognition with 95% plus density. By contrast, the pre-entry closed shop was a separate institutional form. The wage premium gained by those in the pre-entry closed shop was roughly double that for recognition alone.

The respective merits of multiple versus single unionism in a workplace, whether from the management or union standpoint, has long been a matter of debate (see for example Donovan Report paras. 672-691). Secondary analysis from WIRS2 provides evidence on this issue. Multiple unions which bargain separately achieve a significantly larger pay premium than both multiple unions which bargain jointly (often called "single-table" bargaining) and single unions. However, multiple unions with single-table bargaining and single unions have identical wage premia over non-union workplaces.

Until recently the link between the product market and the labour market was rather neglected. Stewart (1990) helps to rectify this omission in the case of pay. In the vast majority of establishments facing competitive product market conditions, unions are unable to achieve wage levels above those paid elsewhere to comparable non-union workers. Likewise they cannot create differentials over non-union pay in establishments which operate primarily in international markets -- foreign competition restrains union influence. By contrast, in establishments in firms with market power there is considerably greater scope for unions to achieve pay levels significantly above those paid to comparable non-union workers, especially where a pre-entry closed shop is present. It is monopoly power in the product market of the firm that provides a rent ("surplus") and unions are able to bargain a share of these super-normal profits.

There is less evidence concerning changes in this pay structure. The weight of what little there is points to a decline in the union mark-up. Ingram (1991) uses the CBI pay databank to show that, in every year except one, 1979-1989 pay increases in unionised bargaining groups were lower than their non-union counterparts. The cumulative fall in the differential was 4%. Gregg and Machin (1992) undertook their own survey of nearly 300 firms employing some 2m workers and concluded that, in the 1980s, unionised firms experienced slower wage growth than non-union firms and that "this is consistent with an erosion of the average union/non-union wage differential in these firms over the late 1980s." Stewart (1992) analysed workplace data from WIRS2 (1984) and WIRS3 (1990). The average union differential (for semi-skilled workers) fell from 0.088 to 0.062, with a particularly noticeable collapse in the previous mark-up gained by those in pre-entry closed shops. The panel data (537 establishments) tell the same story:

	Wage Growth 1984-90 Change in Log Median Wage (mid point) Weighted Means		
Overall Mean			.40
No recognition in 1984		.42	
Recognition in 1984		.37	
No recognition in 1990	.28		
Recognition in 1990	.38		

Thus pay rises were greater in workplaces where unions were not recognized than where they are. Further, where de-recognition occurred between 1984 and 1990 the pay rise was even lower. The differential based on industry data first estimated by Layard, Metcalf and Nickell (1978) was also lower in the second half of the 1980s than in the first half (but this series is less robust than that based on other data).

When the union wage differential is calculated from data on individuals it appears, in contrast to the above evidence, to be roughly stable. This holds for studies based on both the British Social Attitudes Survey (Blanchflower 1991) and the Family Expenditure Survey (Symons and Walker 1988).

The bulk of the evidence -- both in terms of data sources and number of studies -- therefore points to a decline in the union/non-union pay differential since 1980. What effect should this have on employment? Minford (1983) and Hayek (1984) argued that prior to 1980 pay in union workplaces was boosted by immunities and the closed shop. This, they said, lowered employment in the union sector. In turn, displaced labour put downward pressure on pay in the non-union sector making work less attractive relative to unemployment benefit, resulting in higher unemployment. They proposed, therefore, lower unemployment pay, the elimination of various immunities enjoyed by unions in connection with their activities and the outlawing of the closed shop. This, it was held, would reduce the union mark-up with beneficial effects on employment levels. Minford and Hayek seem to have got their wish - their prescriptions were enacted and the union differential is lower now than in 1980. Alas, the favourable predicted employment effects have not emerged. Rather the reverse: employment is lower in the union sector than in 1980 and aggregate unemployment has at least doubled.

Blanchflower, Millward and Oswald (1991) explain the lack of success on the jobs front - given that the Hayek-Minford prescriptions have been followed - by suggesting that unions have (in addition to a positive wage differential) a negative impact on employment growth in the private sector. They state that this differential is -3% a year: unionised workplaces lose 3% more jobs or gain 3% fewer jobs, each year, than their non-union counterparts. Their article produced an acrimonious academic exchange (see Machin and Wadhwani 1991a). It is plausible that it is not really possible to estimate the dynamic impact of unions on jobs from the cross-section (WIRS1 and 2) data used by the protagonists. Further, the -3% differential on employment growth is presumably time-specific (in their case

1980-84). Thus, Millward et al. (1992, p. 322) argue that any such adverse effect was attenuated 1984-90.

Unions are a force for pay equality -- they have a "sword of justice" effect. The pay distribution is less dispersed for union than for non-union workers. And union activity narrows the wage structure as between females and males, disabled and able-bodied, blacks and whites, manuals and non-manuals (Metcalf 1982). The ebbing of union strength has been associated with a huge increase in the inequality in pay among both individuals and workplaces between 1980 and 1990 (Gosling and Machin 1992, Schmitt 1993). For example, Gosling and Machin show that across establishment inequality was much greater in 1990 than in 1980. The decline in the share of plants with recognized unions accounts for a fifth of the coincident rise in earnings inequality. Further, within-establishment wage inequality increased in both union and non-union plants, but far more in the latter. This implies that the pay-equalising effects of unions became more marked through the decade.

The growing inequality in pay occurred during the decade in which unemployment twice topped 3m. The promotion of inequality has patently failed to deliver the aggregate employment goods. Further, the unemployment rate of 18- and 19-year olds, who were removed from Wage Council coverage in 1986 because it was held that the Councils were pricing them out of jobs, is unchanged relative to the all-age rate. It seems that the causal relationship runs from higher unemployment to greater inequality rather than vice versa.

The third interaction between the industrial relations system and pay and jobs concerns the break-up of the traditional system of industrial relations. There are fewer workers covered by collective bargaining, such bargaining is more decentralised, pay is more sensitive to individual and workplace performance and to local labour market conditions than previously. This could provide one explanation of an enduring puzzle of the 1980s (Carruth and Oswald 1989). Despite higher unemployment, the growth in competition and the legislative onslaught against unions, real wages grew faster than at any other time in the post-war period (Bayliss 1993). The insiders changed their work practices (Ingram 1991), and the efficiency, productivity and profits of their establishments were given a boost, at least in manufacturing. The insiders got their reward in the form of higher real earnings. But simultaneously the number of outsiders - the unemployed - was growing. Millward et al. (1992) demonstrate (table 7.11) that the labour market is not wholly competitive - ability to pay, profitability, and productivity growth all matter too. In these circumstances the outsiders exercise less influence on the process of pay determination than previously. So successively higher levels of unemployment are required to control wage inflation.

6 Company and Workplace Performance

Connections between the industrial relations system and three dimensions of company and workplace performance - productivity, profitability and investment - are examined here. In each case we examine how the links have varied over time.

(a) Productivity

Alterations in the institutions and conduct of industrial relations outlined in part I contributed to two noteworthy, interrelated features of British productivity performance in the 1980s. First, growth in manufacturing output per head improved such that Britain was top of the OECD-major 7 nations growth league table in the 1980s, after being bottom in both the 1960s and 1970s. Labour productivity in manufacturing has continued to grow rapidly in the 1990s (some 4% p.a.) reflecting the sharper fall in employment than output. Second, averaged over the 1980s, unionised workplaces, companies and industries had a superior productivity growth record than their non-union counterparts.

The improved productivity performance of the manufacturing sector in the 1980s was attributable to the interaction of greater product market competition, high unemployment and anti-union legislation (Metcalf 1990). Crafts (1993) recently echoed these findings. In the most comprehensive review yet of manufacturing industry in recent times he writes: "Better performance came from an intensification of competitive pressures on management, a weakening of trade union bargaining power and a retreat from the unsuccessful interventionist policies of the 1960s and 1970s. There was a substantial shake-out of inefficiencies which had previously been allowed to persist" (pp. 76-77). As a consequence of this turnaround in UK performance the gap between the level of labour productivity in Britain and in other countries was narrowed (Crafts 1993, table 6):

Manufacturing Output per person Employed (UK = 100)

	USA / UK	Germany / UK	France / UK
1977	230	149	138
1989	177	105	112

Unionised workplaces, companies and industries contributed disproportionately to the reversal in the aggregate productivity growth performance of manufacturing. In the second half of the 1970s productivity growth was lower in unionised companies than in non-union companies (Nickell et al. 1992). This resulted in such unionised firms having, on average, a lower level of labour productivity than their non-union counterparts around 1980, particularly in large workplaces with a closed shop (Machin 1991a). Then during the 1980s unionised companies narrowed, and quite possibly eliminated or even reversed, the favourable productivity edge previously enjoyed by non-union companies (Gregg et al. 1993).

It is likely that the differential growth in unionised workplaces and companies in the first part of the 1980s was mainly a consequence of changes in work organisation. For example, Machin and Wadhwani (1991) referring to 1981-84 state that "unionised plants were more likely to have experienced a change in work practices because they are more likely to have restrictions on managerial discretion vis a vis restrictive practices in the first place."

However, the re-assertion of managerial prerogative did not stop at the conduct of industrial relations. It has also influenced the institutions themselves. Dunn and Wright (1993), after extensive detailed case studies, describe the closed shop as "moribund". Gregg and Yates (1991) note the extensive, albeit usually partial, de-recognition of unions for collective bargaining in the second half of the 1980s. Purcell (1991) captures these changes when he writes -- on the basis of his case studies -- that "the constraints on management action, traditionally reflected and reinforced through the institutions and procedures of industrial relations, especially collective bargaining, have been significantly weakened." Gregg et al. (1993) show why these modifications to the structure of industrial relations matter. Productivity growth 1985-1989 was higher in companies which recognised unions in 1985 than it was in non-union companies. But it was still higher where there had been a change in the union institutions -- rescinding a previous union membership agreement (closed shop) and/or full or partial de-recognition. They conclude that "the visible evidence of changes in union status probably acts as a signal to the workforce of a greater assertiveness on the part of management."

It must be emphasised that much of the productivity growth in the 1980s -- particularly in unionised workplaces and companies -- flowed from unrepeatable sources. The conduct of industrial relations was changed by, for example, alterations to working practices. The institutions were modified in places by rescinding union membership agreements or by de-recognition of the union for collective bargaining purposes. The higher growth rates of the last decade can only be sustained in the future by either greater investment in physical and human capital or a change in the rules of the game away from adversarial towards co-operative industrial relations. Paradoxically, this offers hope. Past failures -- underinvestment and a reliance by management on compliance rather than co-operation -- imply considerable scope for future productivity growth.

(b) Profitability

Unanimity exists in the 8 UK studies which use workplaces, firms or industries to analyse the link between profitability and industrial relations: all show a significant negative association between unionisation and financial performance or profitability. WIRS data are used in 3 studies, summarised in table 6. In two further studies the firm is the unit of observation (Cable and Machin 1991; Machin 1991) while industry data are used in Conyon and Machin (1991) and Dowrick (1990). One study (Geroski et al. 1991) mixes industry-level industrial relations indicators with firm level financial data.

It will be seen from table 6 that both union recognition and the closed shop are linked with a greater likelihood of below average performance. Possibly more interesting are the findings of Machin et al. (1992) concerning multi-unionism. Among unionised manufacturing workplaces, multiple unionism with single table bargaining generates a similar financial performance to a single union environment.. However, when multiple unionism is accompanied by separate bargaining arrangements, financial performance is significantly worse.

The crucial question concerning this apparent link between industrial relations institutions and financial performance is: does it matter in the long run? If all we are observing is a shift in the distribution from capital to labour -- from profits to pay -- many would say "so much the better." But if the lower profitability results in less investment in research and development and in physical and human capital this will damage the dynamic prospects of the workplace and company. It would also tend to lead to a worse performance on job creation than would otherwise be the case.

There is tentative evidence that what we are observing is largely a matter of equity between labour and capital and that it has few implications concerning long run economic senescence. The first batch of evidence concerns the profitability studies themselves. The second relates to the link between industrial relations systems and investment rates.

Cable and Machin (1991) conclude that the profitability results are simply the mirror image of the well-known results on the union wage differential. High density or the closed shop or multi-unionism generates a wage differential compared with otherwise similar non-union workers, but it does not lower profitability over and above this labour cost effect. There is increasing evidence that the union wage differential is associated with some degree of monopoly power in the product market (see e.g. Stewart 1990, Gregg and Machin 1992). This, in turn, implies that unions are simply creaming off some of the firms' super-normal profits in the form of higher pay. Such a line of reasoning is reinforced by the studies of Machin and Stewart (1991), Machin (1991) and Conyon and Machin (1991) which each find that unions only lower financial performance, *ceteris paribus*, where the firm has some product market power.

It appears, provisionally, that this link between unionisation and financial performance became weaker as the 1980s progressed. Millward et al. present a cross-tabulation (from table 3.4) which shows:

Financial Performance compared with other workplaces in the same industry	Average Union Density (%)		
	1984	1990	
Lots better		29	33
A little better	44	37	
About average	45	35	
A little below average	52	40	
Lots below average	74	63	

Although average union density in workplaces reporting below average performance remains higher than it is in those reporting above average performance, the association is less pronounced in 1990 than it was in 1984.

(c) Investment

Capital accumulation is the key to long run growth. Therefore, the impact of our industrial relations system on investment -- in new technology, process and product innovation, research and development and in human capital -- is of vital importance. The Department of Employment (1981, para. 1) has asserted that "For at least a generation now our industrial relations have failed us because they have ... acted as a disincentive to investment and discouraged innovation." That pronouncement is scrutinised here.

Unfortunately the only evidence relates to the impact of various characteristics of unions on investment. This is a pity. The evidence is ambiguous and, anyway, it is plausible that the propensities of management dominate the investment decision.

Any link between unionisation and investment is an empirical matter because the theoretical arguments cut both ways. On the one hand, union pressure on pay will cause firms to invest more heavily so as to reduce their need for expensive labour. On the other hand, union presence might lower investment directly or indirectly. The direct effect occurs if a union delays the installation of new machinery or operates inflexible work rules inhibiting the full use of the investment. Any indirect effect is less easy to spot. When a company invests in a new project, unionised workers may capture ("tax") some of the returns in the form of higher pay because, once the capital is installed or the R and D done, the process cannot easily be reversed thereby weakening the company's bargaining position.

The evidence is conflicting. In very broad terms cross-section evidence from workplaces, firms and industries suggests that unionised organisations have a superior investment performance to their non-union counterparts. By contrast, time series evidence tentatively suggests that unions have a depressing effect on investment.

WIRS2 has been used in three studies and these are summarised in table 7. Machin and Wadhwani (1991) examined the incidence of different forms of investment between 1981 and 1984. Advanced technical change incorporates micro-electronics whereas the conventional variety does not. Previously Daniel (1987) noted from cross-tabulations that unionised workplaces undertook more of both types of investment than non-union workplaces in the early 1980s.

This raw positive correlation is explained by Machin and Wadhwani (1991) by three factors operating in the early 1980s. First, unionised workplaces had higher pay than non-union workplaces, which directly encouraged greater investment. Second, unionised workplaces were experiencing more organizational change -- particularly the elimination of restrictive practices -- than non-union workplaces. Such organization change frequently went hand-in-hand with more investment. Third, union voice has a background role in the higher investment via more formalised consultative procedures.

Latreille (1992) considers whether or not the workplace has <u>ever</u> invested in microelectronic technology (rather than such investment just between 1981-84) by studying its use. Workplaces where unions were recognised were 12% more likely to use such equipment than non-union workplaces. A similar conclusion emerges from the more detailed case studies of Litner et al. (1987).

Denny and Nickell (1991, 1992) get the most clear-cut union effects. Their sample is drawn from manufacturing industries and incorporates information on industrial relations variables from WIRS1 and 2. They find, for 1980-84, that union recognition depresses investment, but that this adverse effect is offset as density rises. However, even 100% density does not completely counter the negative recognition effect. By implication, they point out that the worst possible situation is union recognition but with only a small fraction of the workforce being union members. Fortunately, this is rather rare. Voice effects are also apparent -- where many workers are covered by joint consultative councils (whether in union or non-union workplaces) investment rates are higher.

Thus three studies use information from WIRS to analyse the link between unionisation and investment. Two show, essentially, a positive association, while one reports both positive and negative links with the latter dominating. Unfortunately, time series evidence is rather inconsistent with these results. Manning (1987) and Wadhwani and Wall (1989) both report no significant associations. Denny and Nickell (1992) and Tsamourgelis (1990) disclose that union recognition and mark-ups (respectively) are negatively associated with investment. It is interesting to note, however, that such effects are attenuated in the 1980s compared to the 1960s and 1970s. By the mid

1980s the adverse association between recognition and investment was halved compared with a decade earlier.

It is clear, even from this brief survey, that the link between unionisation and investment is complex. The evidence is mixed but there is, at worst, no strong evidence of British unions adversely affecting investment in the 1980s or 1990s. And, if anything, unionised workplaces use more, and invest more in, advanced capital equipment and human capital than do their non-union equivalents. Thus the quote at the beginning of this section from the DE Green Paper on *Trade Union Immunities* probably no longer holds (if it ever did) concerning the link between unions and investment. This is not really surprising: investment is the <u>change</u> in capital stock and the evidence above suggests that unions are more likely to impact on levels (of pay, productivity, etc.) than on changes in these variables.

7 Summary and Conclusions

There can be no doubt that the institutions and processes of British industrial relations changed fundamentally in the last decade or so. In part I it was shown that:

* Union membership haemorrhaged. The 14-year 3 million free-fall in membership since 1979 is the longest ever period of decline. The closed shop is almost extinct and new recognitions are rare. It should be noted, however, that 2-employees-in-5 still belong to a union, an impressive figure by international standards.
* Management prerogatives were restored. Management often extricated itself from previous pluralist arrangements involving joint regulation with unions. There was some spread of human resource management practices, mainly in unionised workplaces, but they have a shallow hold. More importantly collective agreements were altered to emphasise greater flexibility of work organisation.
* Under half of employees are now covered by collective agreements compared with nearly three quarters in the mid-1970s. Where collective bargaining remains 4-in-5 employees are now covered by single employer agreements, reflecting the virtual collapse of multi-employer national agreements. Simultaneously the fragmentation of bargaining inside the company has been moderated: most multi-plant employers now bargain at company rather than workplace level.
* The industrial relations environment has become harsher. Each successive peak of unemployment reaches a new higher level. Product

market competition has intensified. State subsidies to lame duck, monopolistic, highly unionised firms have been axed. Legislative changes have undermined collectivism by promoting individual responsibility, voice, exit from collective agreements, and loyalty to the company.

Thus the institutional structure and the conduct of industrial relations have probably been "transformed" as the Secretary of State for Employment claimed in 1990. But what of the performance outcomes? Here the story is very different.

In the 1960s and 1970s industrial relations were seen to be central to our economic performance. Our system of labour relations was subject to varieties of social engineering in the 1970s -- for example, pluralism in the workplace, corporatism at national level, a stress on institutions and procedures -- but the emphasis remained on collective relations. By contrast, the 1980s witnessed the rise of individualism and the rule of the market. This certainly altered company performance. In particular, any adverse links between union presence and productivity, financial performance and investment were weakened in the 1980s: it may well be that unionised workplaces now have higher levels of labour productivity and investment than their non-union counterparts. The industrial relations system -- particularly concerning union presence -- can no longer be held to stymie companies' achievements. Changes in the environment -- the legislative onslaught, greater competition and higher unemployment -- reduced any monopoly effects of unions on company and workplace performance. But this is surely not a "transformation". The changed outcomes seem to be mainly the result of compliance by labour in the conduct of workplace relations. What is still needed for a transformation is a change of gear by management -- greater emphasis on co-operation and more investment in physical and human capital.

The impact of changes in industrial relations institutions and processes on the pay/jobs trade-off are even more acutely depressing. The pay-setting institutions have certainly been transformed: fewer workers are in collective agreements, bargaining is decentralised, the century-old tradition of "the rate for the job" has been ruptured, Fair Wage Resolutions and comparability machinery have been withdrawn, there is greater sensitivity to the fortunes of the company and the performance of the individual. The government and their acolytes have achieved virtually all they set out to do yet unemployment rises inexorably to a post-war record high.

Here there can only be two conclusions. Either the government got it wrong concerning the link between pay-setting institutions and procedures and the employment outcomes. If so, the emphasis on individual and company performance and the undermining of collective organisation should be reversed. Instead, there should be greater stress on a national economic assessment and co-ordination and synchronization of bargaining. Alternatively, the government got it right about pay setting. In this case its macroeconomic policy must be a shambles. Either way it is a tragedy that more than 3 million unemployed are needed to implement government policy.

TABLE 1

Trade Union Membership (thousands) and Density (%)

	UK (1)	GB corrected (2)	TUC affiliated (3)	GB density (4)
1960	9,835	8,852	8,299	41.3
1965	10,181	9,163	8,868	40.5
1970	11,178	10,060	10,002	48.2
1975	12,184	10,966	11,063	49.4
1979	13,289	11,960	12,173	52.9
1985	10,821	9,739	9,581	46.6
1990	9,947	8,952	8,230	40.0
Membership loss 1979-90	3,342	3,008	3,943 (3,608)	12.9

Notes and Sources:

(1) Membership of UK trade unions. Annual article in Employment Gazette (e.g. April 1992, p. 187) Information supplied by unions themselves to the Certification Officer.

(2) Union membership among employees in employment in Great Britain. This is derived from Column 1, suitably corrected. It is necessary to deduct:
   (a) self employed and unemployed,
   (b) members in Northern Ireland and overseas.
   10% of union members as defined in Column 1 fall into categories (a) and (b), so Column 1 is multiplied by 0.9. It should be noted that unions may either over-report their membership (e.g. to boost their importance in the TUC and Labour party) or under-report (to reduce affiliation fees). No full information exists on the direction of bias and no correction is made.

(3) Membership of unions affiliated to the TUC as supplied by the unions themselves. Figure in brackets is for information. It "adds back" EETPU membership to control for the expulsion of the EETPU in 1988.

(4) Column 2 as a percentage of GB employees in employment, Employment Gazette, table 1.2.

TABLE 2

Union Presence 1984 and 1990

	Indicator	1984 %	1990 %
1.	**Recognition**		
	Establishments with recognized trade unions for any workers as % of all establishments	66	53
2.	**Density (% of all employees who were union members)**		
	All employees	58	48
	Manual	66	53
	Non-manual	61	43
	Private manufacturing	56	48
	Private services	30	27
	Public sector	80	72
3.	**Multiple unions (number of recognized unions, excluding workplaces with no recognized unions)**		
	Manual		
	1	65	66
	2	21	19
	3+	14	15
	Non-manual		
	1	39	45
	2	28	31
	3+	33	23
4.	**Closed Shop**		
	Number of employees (millions)	3.6	0.4
	% of establishments where all or some groups have to be union members		
	Manual	20	4
	Non-manual	9	1

Note: Information based on representative sample of some 2,000 workplaces with 25+ employees in 1984 and 1990.

Source: Millward et al. (1992) tables 3.7, 3.2, 3.8, 3.9, 3.17.

TABLE 3

Changes in Payment Systems

		% of establishments with	
		1984	1990
1.	**Payments by Results**		
	Any worker paid by results on individual, group or organizational basis		
	Manual	31	32
	Clerical, administrative, secretarial	16	19
2.	**Individual payments: any worker with:**		
	Individual PBR	n.a.	27
	Merit Pay	n.a.	34
	Either	n.a.	45
3.	**Profit sharing**		
	Cash-based or share-based profit sharing, establishments in industrial and commercial sectors	18	43
4.	**Employee Share Ownership Schemes**		
	Share ownership or share option schemes	23	32
	Eligibility: % of workforce eligible where schemes exist	68	62
	Participation: % of workforce participating	22	34

Note: See note to table 2.

Source: Millward et al. (1992) tables 7.19, 7.20, pages 264, 265.

TABLE 6

Studies of Financial Performance based on Workplace Industrial Relations Surveys

Author	Sample	Industrial Relations Indicator	Controls	Results
Blanchflower and Oswald (1988)	1209 private sector establishments WIRS2 1984	Recognition Closed Shop Performance related pay scheme	LC/TC Plant size Demand shocks International competition Industry controls Region controls	Recognition and closed shop sig -ve Pay schemes have no effect on performance
Machin and Stewart (1990)	1134 private mfg establishments 623 WIRS1 1980 511 WIRS2 1984	Recognition Pre-entry closed shop	Market Share Demand K:L Ratio Capacity utilisation 5-firm concentration ratio Industry performance Industry TU coverage	Recognition and closed shop sig -ve Greater effect - 1984 than 1980 - when market share high - with closed shop
Machin, Stewart and Van Reenen (1992)	566 private mfg unionised establishments WIRS2 1984	Multiple unionism Multiple bargaining	As Machin and Stewart (1990)	Multiple bargaining significantly worsens performance

Note: Financial performance defined by managers' assessments of their own establishments' financial performance. They were asked the following question (Q14a Management Questionnaire, p.8): How would you assess the financial performance of this establishment compared to other establishments in the same industry? They could answer: (i) better than average; (ii) about average; (iii) below average; (iv) no comparison possible.

TABLE 7

Studies of Investment based on Workplace Industrial Relations Surveys

Author	Sample	Measure of Investment	Union Indicator	Control Variables	Union Effect
Machin and Wadhwani (1991)	630 private mfg. and service workplaces WIRS2	Whether introduced 1981-84 (i)Conventional tech. change (ii) Advanced tech. change	Recognition	Capacity utilisation Product demand Organizational change Financial performance Size of plant Industry	Both (i) and (ii) +ve but not significant
Latreille (1992)	418 private mfg. workplaces WIRS2	Use of microelectronic technology	Recognition Pre-entry closed shop Multi-unionism JCC Decentralised bargaining	Size of plant Subsidiary Ownership % skilled Product market	Recognition sig +ve c. 12% All other indicators non-significant

Denny and Nickell (1992)	73 3-digit manufacturing industries 1980-84, incorporating WIRS1 and 2 data	Investment rate	Recognition Density	Industry demand Prices Technical progress Pay Expected growth	Recognition -ve Density +ve 100% density not sufficient to offset recognition effect

TABLE 5

Union/Non-union Wage Structure, Semi-skilled Workers, 1984 Workplace Industrial Relations Survey

Author	Sample	Union Indicator	Union Effect %
Stewart (1991)	1,005 private sector workplaces	Recognition	Average union cf. average non-union 8
Metcalf and Stewart (1992)	660 private sector workplaces	Recognition Density Closed Shop	No closed shop: - recognition, density <95% 0 - recognition, density >95% 7-10 Closed shop: - post-entry 7-10 - pre-entry 17-19

Author	Sample	Union Indicator	Union Effect %
Machin, Stewart and Van Reenen (1991)	683 private sector workplaces	Single or multiple unions	Average union cf. average non-union 10 Around which: - multiple unions bargaining separately 12 - single bargains 8

Notes: In each case the pay measure is the typical weekly earnings of a semi-skilled manual worker.
The following control variables are included: workplace size, industry, single or multiple establishment company, foreign or domestic owned, shiftwork, PBR, % manual, % part-time, % skilled, % female.

TABLE 4

% Having Most Recent Pay Rise determined by Collective Bargaining

Sector	Manual		Non-manual		All Employees	
	1980 Estabs	1990 Estabs	1980	1990 Estabs	1984	1990
Private Manufacturing	65	45	27	24	64	51
Private Services	34	31	28	26	41	33
Public Sector	91a	78	98a	84	95	78
All	55	48	47	43	71	54

Notes: **a** 1984 (not 1980)

Source: Millward et al. (1992) tables 3.15, 3.16, 7.2, 7.5, 7.8.

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